

NTP Board of Scientific Counselors Technical Reports Review Subcommittee

Report from the meeting held February 25, 2009

Raymond Novak, Ph.D. Subcommittee Chair





Goldenseal Root Powder

Natural herbal product

Based on a 2-year feed study, the subcommittee approved the conclusions with 8 yes votes, 0 no votes and 0 abstentions.

| Sex/Species | Evidence | Neoplastic lesions |
|--------------------|----------|--|
| Male rats | CE | Hepatocellular adenoma and Hepatocellular adenoma /or carcinoma (combined) |
| Female rats | CE | Hepatocellular adenoma |
| Male mice | SE | Hepatoblastoma and multiple hepatocellular adenoma |
| Female mice | NE | <u>-</u> |
| CE= clear evidence | | |
| SE = some evidence | | |
| NE = no evidence | | |



Androstenedione

Dietary supplement

Based on a 2-year gavage study, the subcommittee approved the conclusions with 8 yes votes, 0 no votes and 0 abstentions.

| Sex/Species | Evidence | Neoplastic lesions |
|-------------|----------|---|
| Male rats | EE | Alveolar/bronchiolar adenoma and alveolar/bronchiolar adenoma or carcinoma (combined) |
| Female rats | EE | Mononuclear cell leukemia |
| Male mice | CE | Liver neoplasms (multiple adenoma and carcinoma and hepatoblastoma) |
| Female mice | CE | Hepatocellular adenoma and hepatocellular carcinoma |

CE = clear evidence

EE = equivocal evidence



2,3',4,4',5-Pentachlorobiphenyl (PCB 118)

Insulating fluid for electronics

Based on a 2-year gavage study, the subcommittee approved the conclusions with 7 yes votes, 1 no vote and 0 abstentions

| Sex/Species | Evidence | Neoplastic lesions |
|--|----------|---|
| Female rats (Harlan Sprague-Dawley) | CE | Liver neoplasms (cholangiocarcinoma, hepatocholangioma, hepatocellular adenoma) and cystic keratinizing epithelioma of the lung |

CE= clear evidence



3,3',4,4'-Tetrachloroazobenzene

By-product of herbicide production

Based on a 2-year gavage study, the subcommittee approved the conclusions with 8 yes votes, 0 no votes and 0 abstentions

| Sex/Species | Evidence | Neoplastic lesions |
|---|----------|--|
| Male rats (Harlan Sprague-Dawley) | CE | Cystic keratinizing epithelioma of the lung, cholangiocarcinoma of the liver, gingival squamous cell carcinoma |
| Female rats (Harlan Sprague- Dawley) | CE | Cystic keratinizing epithelioma of the lung, gingival squamous cell carcinoma |
| Male mice | CE | Transitional epithelial gland carcinoma of the urethra, alveolar/bronchiolar neoplasms of the lung |
| Female mice | CE | Fibrosarcoma and fibrosarcoma or malignant schwannoma (combined of the skin |
| CE = clear evidence | | |



$\begin{array}{c} \beta\text{-Myrcene} \\ \text{Natural plant product} \end{array}$

Based on a 2-year gavage study; the subcommittee approved the conclusions with 8 yes votes, 0 no votes and 0 abstentions

| Sex/Species | Evidence | Neoplastic lesions |
|-------------|----------|---|
| Male rats | CE | Renal tubule neoplasms |
| Female rats | EE | Renal tubule adenoma |
| Male mice | CE | Hepatocellular adenoma, hepatocellular carcinoma and hepatoblastoma |
| Female mice | EE | Hepatocellular adenoma and hepatocellular carcinoma |

CE = clear evidence

EE = equivocal evidence



Tetralin

Solvent for naphthalene, fats, resins, oils, and waxes

Based on a 2-year inhalation study; the subcommittee approved the conclusions with 7 yes votes, 1 no vote and 0 abstentions

| Sex/Species | Evidence | Neoplastic lesions |
|-------------|----------|---|
| Male rats | SE | Renal tubule adenoma |
| Female rats | SE | Hepatocellular neoplasms (adenoma and adenoma or carcinoma, combined) and uterine stromal polyps |
| Male mice | NE | - |
| Female mice | EE | Splenic hemangiosarcoma |

SE = some evidence

EE = equivocal evidence

NE = no evidence